



No. 178

Violent Assaults on Taxi Drivers: Incidence Patterns and Risk Factors

Claire Mayhew

Violence is a common experience for taxi drivers, although most incidents involve only shouting, swearing and threats. While physical attacks are less frequent, a minimum of one homicide a year occurs in Australia. This paper discusses the patterns of violence and identifies risk factors. A subsequent Trends and Issues paper (number 179) focuses on prevention strategies.

Taxi drivers are “popular” targets because they work alone, are unprotected, accept passengers whose attitudes to violence are unknown—and they carry cash. Media publicity about assaults may, unfortunately, increase the probability of future attacks.

Adam Graycar
Director

Introduction: Characteristics of Taxi Work

The taxi industry usually provides a 24-hour-a-day, seven-day-a-week service, with most drivers working 12-hour shifts. The labour force is overwhelmingly male in cities, although there is an increased proportion of females in smaller country towns (Stenning 1996, pp. 18, 24, 37; Keatsdale Pty Ltd 1995).

Some taxi drivers own their taxis, others lease the cab from an owner, some companies own fleets of taxis and hire casual drivers, and many operate on a “pay in” basis with drivers paying a pre-set amount to owners for a shift—sometimes including fuel costs (Rothengatter 1999, pp. 1, 6; Dalziel & Job 1997, p. 116; Stenning 1996, p. 16). Employee drivers can be hired on a permanent, casual or irregular basis. The job tasks are the same for all, although owners have improved access to preferred shifts and better paying trips. Casual drivers frequently work any available shifts, and more commonly pick up passengers in the evening in inner-city areas who have been out drinking—in order to “break even”. Competition for fares can be fierce.

Many drivers are of non-English-speaking background. Each Australian city is distinctive, with diversity particularly noticeable in Sydney where, according to the most recent estimates, 62 per cent of the labour force are from a non-English-speaking background (Keatsdale Pty Ltd 1995, pp. vi, 58). An over-representation of immigrants in the taxi labour force is also seen in other industrialised countries such as Canada (Appleby 2000, p. 2; Stenning 1996, pp. 24, 37–38) and the United States (Barton 1996).

There are no reliable data on correlations between ethnicity and violence levels. The available data are confounded because drivers who have English as a first language tend to work in slightly different areas to those for whom it is a second language. Violent incidents appear to be especially common for drivers from

AUSTRALIAN INSTITUTE
OF CRIMINOLOGY

trends
&
issues

in crime and criminal justice

November 2000

ISSN 0817-8542

ISBN 0 642 24195 3



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the Middle East and southern Asia, who frequently work in high-risk pick-up suburbs (Adams 1996, p. 44; Keatsdale Pty Ltd 1995, pp. vi, 58). However, the substantial Canadian study by Stenning (1996, p. 64) found no variation in levels of victimisation by ethnicity or language.

Because taxi drivers usually work 12-hour shifts, night driving is inevitable. However, night driving involves disruption to the normal body circadian rhythm and results in decreased concentration capacities at low biological points, that is, between 2am and 4am. Inevitably the ability to perform complicated tasks, or recognise warning signs of impending violence, are compromised at these low points of the circadian rhythm. Any relationship between circadian rhythms and times of assaults is unknown.

The Risks of Violence for Taxi Drivers

Chappell and Di Martino (1998, p. 46) estimated that taxi drivers have up to 15 times the average exposure to occupational violence. The high incidence of assaults on taxi drivers compared with other workers is consistent over time (Chappell 2000, p. 290; Knestaut 1997; Jenkins 1996, p. 224).

In the United States, taxi drivers account for nine per cent of all occupational homicides and have nearly 60 times the average rate of assault (NIOSH 2000, p. 2; NIOSH 1995, p. 3; Jenkins 1996, p. 222; Myers 1996, p. 5; Davis 1987). The risks are highest for unmarked "gypsy" cabs that go anywhere for a fare (Marosi 1996). According to OSHA (2000), 510 United States taxi drivers were murdered on the job between 1992 and 1998. Nevertheless, death certificates were estimated to record only 72–81 per cent of work-related fatalities (Castillo & Jenkins 1994, p. 129). The comprehensive 10-year evaluation by Castillo and

Jenkins (1994, pp. 125, 127) also found taxi drivers had the highest rate of work-related homicide of any group (26.9 per 100,000 workers, compared with the average of 0.71). Another study estimated a homicide rate of 41.4 per 100,000 drivers (Jenkins 1996, p. 223). Half of all homicides involved robbery (Castillo & Jenkins 1994, p. 130). The incidence of assaults was estimated through a survey of United States taxi companies: 72 per cent had experienced passenger violence in the previous 12 months, most involved firearms (Lawrence cited in Elsworth 1997, p. 28). Stone and Bienvenu (1995, pp. 5–8, 31) estimated that risks were highest in cities with populations under 100,000, and in inner-city and low-income areas. Similar risks exist for Canadian taxi drivers (Stenning 1996, p. 3).

High levels of risk are also evident in Europe. Elzinga (1996, pp. 205–7) conducted a national survey of taxi drivers in the Netherlands and estimated that three-quarters had been victimised over a 12-month period, four per cent suffered grievous bodily harm and 22 per cent were threatened. In Scotland, taxi firms were found to suffer disproportionately from violent attacks, threats, fraud and thefts (Burrows et al. 1999, pp. 43, 108).

For the small number of women who drive taxis, rape is an additional risk. An in-depth study of workers' compensation claims data in Washington over a 10-year period found that female taxi drivers had the highest risk of rape (Alexander, Franklin & Wolf 1994, p. 641). Risk factors included working alone, customers who were strangers, and working between 7pm and 6am. Nevertheless, the authors concluded that their study substantially underestimated the incidence of work-related rape (Alexander, Franklin & Wolf 1994, p. 641). In a Sydney study, female taxi drivers reported constant verbal abuse and physical harassment from

customers (Hume 1995, p. 16). Estimates of sexual assaults on male taxi drivers are quite unreliable (Ball 1999, p. 2). Another risk for male drivers is female passengers who threaten allegations of sexual advances unless a fare-free journey is provided (Radbone 1998, p. 6; Stenning 1996, p. 19).

Records about Violent Assaults on Australian Taxi Drivers

Around 2.8 per cent of all fatal traumatic work-related injuries in Australia are from occupational violence (Driscoll et al. 1999). Taxi driving is one of the highest risk jobs, with at least one taxi driver murdered on the job each year. However, the risks are lower than the United States where the homicide risk is over four times that in Australia. The incidence of assaults is unknown because:

- Data are scattered across agencies. It is particularly difficult to identify repeat assault offender information (PVCPC 1993, p. 127). For example, in New South Wales:
 - ...records are split across a number of databases, including the road crash database maintained by the Roads and Traffic Authority, the hospital admissions database maintained by the Department of Health, workplace injuries database maintained by the WorkCover Authority, and general databases maintained by the Department of Transport and the taxi industry...data relating to personal endangerment, personal injury, and property damage for both the taxi driver and the passenger(s) should be collated across the fields of workplace safety, road safety, and public safety. (STAYSAFE 1997, p. 204)
- There is significant under-reporting. In New South Wales it was estimated that 90 per cent of incidents are not reported to police (Adams 1996, p. 44; Hume 1995, p. 16). Under-reporting is an

international phenomenon with at best one in five violent incidents recorded (Turnbull & Paterson 1999, p. 9; Barling 1996, p. 29; Elzinga 1996, p. 208; Stenning 1996, pp. xii, 20; Warshaw & Messite 1996, p. 995; Wynne et al. 1996, pp. 9–10; Cox & Leather 1994, p. 214).

- Workers' compensation insurance claims statistics are only collected for employees in most Australian States and Territories—and many taxi drivers are hired under other arrangements. For example, in South Australia, owners and lessees are excluded (Radbone 1997, p. 22).
- Emergency health care facilities treating injured taxi drivers rarely forward data to occupational health and safety authorities.
- Assault-related injuries are often “emotional” rather than physical in nature. For example, the repercussions following a threat to life—without any physical injury—are difficult to define or record as an injury (except for severe conditions such as Post-Traumatic Stress Disorder).
- To prevent outbreaks of fear, violent incident reports can be withheld by taxi companies (Elsworth 1997, p. 27).
- Surveys of taxi drivers are unlikely to provide a total “picture” of the incidence and severity of violence because of the “healthy worker” effect: only workers who are well remain in the job, and those who are ill or injured leave. Yet surveys of taxi drivers rarely make allowance for “healthy worker” impacts on data representativeness. The “healthy worker” effect may partially explain the decreased levels of violence cited by experienced taxi drivers who have been estimated to have a two per cent decline in assaults per year of experience (Elsworth 1997, p. 27). Notably, the substantial Canadian study undertaken by Stenning (1996, p. 64) did *not* find any significant differences in levels of victimisation between experienced and inexperienced drivers.

- Other reasons for not reporting include perceived police inaction, time demands to report, unknown offender whereabouts, fear the driver will be blamed, not wanting to be involved, incidents not serious enough, and even apathy (Stenning 1996, p. 58; Easteal & Wilson 1991, p. 37).

Thus only occasionally after an assault occurs does the event appear on any database (WorkCover 1996, p. 2). As a result of under-reporting, it is not known how many assaults on taxi drivers take place; how many passengers threaten drivers without inflicting injuries; if there are variations between owner, leaseholder or casual drivers, or if differences exist in patterns of violence between Australian cities.

The severity of injury following assaults is less uncertain, although knowledge is far from extensive. In one early study 61 per cent of robberies resulted in no physical injury or a negligible one, 31 per cent had minor injuries and eight per cent had serious injuries (Hogg, Kramer & Drake 1986, p. 34). Fatalities have included taxi drivers hacked with a tomahawk, shot through the back, and locked in the boot (Chappell 1998; SMH 1996). Grievous bodily harm is more likely to be reported (Elzinga 1996, p. 207).

Australian Empirical Studies

There have been three substantive empirical Australian studies: one in Queensland (in 1993), one in New South Wales (in 1995) and one in Victoria (in

1996). While the aspects of violence analysed varied between studies, together they provide a picture of violence in the Australian taxi industry. The Queensland study involved analysis of workers' compensation claims, hospital treatment records, and face-to-face interviewing of 100 randomly selected taxi drivers. The New South Wales study involved a survey of 1,000 drivers, focus group meetings with 120, and 32 face-to-face interviews with drivers who had experienced violence. The Victorian study focused on both violence and robbery, with data collected through a questionnaire posted to all 17,400 known taxi drivers in Victoria, resulting in a 21 per cent response rate. As can be seen in Table 1, marginal variations were found between States, with many taxi drivers victimised in more than one way.

The severity of incidents appears to be increasing over time and to vary marginally from one Australian region to another. A smaller study in South Australia involving 74 respondents found a 12-month incidence of: fare evasion (80%), verbal abuse (75%), damage to vehicle (64%), assault (61%) and robbery (9.5%) (Radbone 1997, p. 4). The substantial Canadian study by Stenning (1996, p. 43) found similar patterns: vandalism (23.3%), fare evasion (22%), assault (20.7%), other theft (15.3%), robbery (10%), theft of taxi (4%), hijacking (4%) and other crimes (2.7%). That is, violence is a common experience for taxi drivers everywhere.

Table 1: *Patterns of Occupational Violence Amongst Taxi Drivers in Australian Studies*

Forms of violence in past 12 months	Queensland (1993)	NSW (1995)	Victoria (1996)
Abused	81%	44.4%	79%
Threatened	17%	19.3%	–
Assaulted	10%	15.2%	40%
Robbery involving violence	–	3.8%	–
Robbery	–	11%	24%
Fare evasion	–	69.4%	84%

Source: Mayhew 1999, pp. 135–6; Keatsdale 1995, p. 27; Haines 1997, pp. 9, 11, 13, 15.

Types of Injury

Patterns of injury following assaults were consistent with attacks from passengers in the rear seat of a taxi. Queensland workers' compensation claims, hospital emergency treatments and interview data indicated upper-body lacerations, open wounds and fractures were the most common injuries (Mayhew 1999, p. 134). In Victoria, the most common injuries were cuts and bruises (41%), head injuries (12%), knife wounds (3%), limb fractures (2%), gunshot wounds (1%), and "other" injuries (15%) (Haines 1997, p. 19). (The New South Wales injury data could not be separated out.) Similarly in the United States, attacks usually came from rear-seat passengers who shot drivers in the head, neck or chest, or slashed the driver's throat, head or chest (Farley 1999, p. 4; Knestaut 1997, p. 2; Stenning 1996, p. 3; Stone & Bienvenu 1995, pp. 12–15).

Severity of Injury

Assaults did not always result in a physical injury, and varied from "broken jaw/broken nose" to "torn shirt" (Mayhew 1999, p. 136). The total expenses paid by the Workers' Compensation Board of Queensland for treatment and salary while taxi drivers were off work following a compensated injury were taken to be a comparatively objective indicator of severity. (This proxy has a number of flaws; for example, a slightly injured person may undergo a number of expensive x-rays.) The severity of assault-related injury increased substantially over the three-year period of secondary data analysed from \$1,620.21 in 1989–1990, to \$4,139.25 in 1990–91, to \$6,340.46 in 1991–92 (Mayhew 1999, p. 135). Despite limitations on the data, the increased costs could reflect an increase in the severity of assaults.

Weapons Used During Assaults

In the Queensland study, the weapons used during assaults included: fists (8%), guns (2%), knives (2%), and teeth/biting (1%) (Mayhew 1999, pp. 135–6). Similarly in the Victorian study, the weapons were: fists (47%), guns (6%), knives (24%), a stick (6%), a syringe (3%) and "other" (15%) (Haines 1997, pp. 13, 15, 1, 69). In Canada, 15 per cent of incidents involved weapons, including guns, knives, bottles, rocks, baseball bats, ice picks or hypodermic needles (Stenning 1996, p. 44). These patterns contrast with the United States where guns are used far more frequently (Stone & Bienvenu 1995, pp. 12–15).

Formal Reporting Of Assaults

Queensland taxi drivers rarely reported assault-related injuries, and none of the 100 interviewees had claimed workers' compensation (Mayhew 1999, p. 136). In New South Wales, around 20 per cent of those assaulted claimed workers' compensation (Keatsdale Pty Ltd 1995, p. iv). Similarly in Victoria only 13 per cent reported their injury to WorkCover; 46 per cent were unaware that they could claim; and 27 per cent believed their injuries were too trivial to report (Haines 1997, p.18). Thus all the Australian studies found that workers' compensation databases significantly understated the incidence of assault-related injury.

Risk Factors

Previously identified risk factors include: evening and night work, intoxicated young male passengers, a driver's inability to speak fluent English, working alone, inadequate driver knowledge of an area, standard sedan taxis, customers with limited funds, and extended waiting times at ranks (see OSHA 2000; Chappell 2000, p. 303;

Burrows et al. 1999, p. 108; Farley 1999, p. 4; Elsworth 1997, p. 26; Knestaut 1997, p. 2; Barton 1996, p. 4; Elzinga 1996, p. 207; NIOSH 1995, p. 4; Castillo & Jenkins 1994, p. 130; PVCPC 1993, p. 27; Eastal & Wilson 1991, pp. 37–8; Manitoba Taxicab Board 1991; Boag 1990, p. 38; Swanton & Scandia 1990, p. 22). The underlying motive for most incidents was robbery (OSHA 2000; Burrows et al. 1999, pp. 58–59; LaMar et al. 1998, p. 318; Stone & Bienvenu 1995, p. 9).

Young male passengers seated in the back seat were common perpetrators (Stone & Bienvenu 1995, pp. 12–15). However homicides have also occurred in daylight hours, in suburbs well known by the taxi driver, by a sober (albeit disturbed) passenger, and where English was the first language of both driver and customer (Chappell 1998).

The physical condition of the taxi may contribute. Stenning (1996, p. 21) argues that dirty taxis encourage offending, and poorly maintained vehicles that break down contribute to passenger aggression. While it has been stated that the introduction of uniforms can reduce aggression, the evidence is suspect—and may be motivated by a desire to improve the public image of the industry (Charlton cited in Elsworth 1997, p. 30; Stenning 1996, p. 22).

Alcohol consumption shows up consistently in studies of violence (Burrows et al. 1999, p. 58). There are a number of related variables: young drinkers more commonly binge drink than adults, levels of aggression increase with alcohol use (although high doses suppress aggression), and testosterone and frustration fuel aggression (Gustafson cited in Homel 1997, pp. 217–24). "The worst passengers are the ones who have had three or four beers and think they can take on the whole

world” (Cruise cited in Eastal & Wilson 1991, p. 38). The presence of drugs may present an even greater risk (Burrows et al. 1999, pp. 50–51, 58).

Eight risk factors were associated with violence in the three Australian empirical studies. Passengers with more of the risk factors were more likely to commit assault:

- male;
- young;
- evening or night;
- inebriation;
- a “hail” from the street;
- inner-city pick-up;
- disadvantaged socioeconomic clients; and
- the pursuit of fare-evaders by drivers (Mayhew 1999, pp. 136–7; Keatsdale Pty Ltd 1995, pp. iii, 60; Haines 1997, pp. 11, 13, 23–4).

Conclusion

Occupational violence is common in the Australian taxi industry, and the patterns of injury are predictable. Verbal abuse can be an everyday occurrence. Assaulted taxi drivers usually suffer bruises, lacerations, and fractures to the head and upper body, as well as emotional repercussions. Few incidents are formally recorded and as a result there is a significant understatement in official databases. As a result of under-reporting, precise estimates of the incidence and severity of violence in the taxi industry are not available. Nevertheless, assaults on the job for taxi drivers can be predicted on the basis of eight core risk factors. Reduction of driver vulnerability depends on recognition of these risk factors, and the installation of appropriate and effective preventive devices. These are detailed in Trends and Issues paper 179.

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